

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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| In the Matter of |) | |
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| Digital Television Distributed Transmission |) | |
| System Technologies |) | MB Docket No. 05-312 |
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**COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION
STATIONS**

The Association of Public Television Stations (“APTS”)¹ hereby submits Comments in the above captioned proceeding. APTS supports the introduction of digital television distributed transmission technologies and urges the Commission to adopt its proposed rules as expeditiously as possible. APTS writes to highlight the importance of distributed transmission to public television and two issues of concern to its members. Specifically, APTS urges that (1) if the Commission requires replication of a single-transmitter station’s contour, the Commission should adopt a policy of ensuring continuity of *viewership*, rather than relying on a simple geographic replication, and (2) the Commission should allow the dissemination of distributed transmission system signals beyond the proposed hypothetical digital maximization contour but as a *secondary* service subject to the prior claims of other primary services.

¹ APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation’s 355 CPB-qualified noncommercial educational television stations. APTS represents public television stations in legislative and policy matters before the Commission, Congress, and the Executive Branch and engages in planning and research activities on behalf of its members.

A. Distributed Transmission Technology Affords Spectrum Efficiency and Improved Public Service

Distributed Transmission is a technique that uses multiple transmitters sharing a channel to deliver a single digital television signal to consumers. It takes advantage of an element of all digital television receivers – the adaptive equalizer – to treat the signals from alternate transmitters as echoes of one another, which are then cancelled or combined in the adaptive equalizer. The advantages of this method are that (1) more uniform and higher level signals can be distributed over a wider area while causing less interference to neighboring operations, (2) gaps in coverage caused by terrain can be filled in, and (3) a variety of natural and man-made phenomena that inhibit reception of DTV signals in numerous situations can be overcome.

Distributed Transmission technology holds great promise to enable broadcasters to use their assigned channels more efficiently while improving service to the public. A number of public television stations are interested in using this technology to bring quality, noncommercial educational digital television and data services on a universal basis. Use of distributed transmission may enable these broadcasters to deliver a digital signal more effectively to rural, remote and isolated population centers, thus serving the public interest.

For example, two public broadcasters in particular have determined that this technology would be useful for addressing their individual circumstances. Both WPSU-Penn State (which already operates a distributed transmission facility pursuant to an experimental license) and Southern Oregon Public Television plan to use distributed

transmission systems to deliver a high-quality digital broadcast signal to population centers separated from the main transmitter by mountainous terrain. For both broadcasters, it would make more sense and be more efficient to provide broadcast signals in this fashion to these population centers rather than broadcasting at high power over a largely unpopulated terrain.

APTS supports the Commission's proposal to afford primary regulatory status to multiple transmitters using distributed transmission technology within the areas that these transmitters are authorized to serve.² The Commission rightly observes that primary status is necessary to "obtain the benefits of spectrum efficiency."³ In addition, insofar as distributed transmission systems are designed to replicate the service area of full power transmitters which themselves have primary status, it is rational and in the public interest to afford such transmitters primary status as well.

B. Commission Policy Should Focus on Continuity of Viewership and Not Simply Geographic Replication

In its NPRM, the Commission proposes to require, as it does with its interim rules, that licensees use distributed transmission systems "to provide, at a minimum, essentially the same level of service" that would be provided using a single-transmitter facility.⁴ APTS understands this concern is motivated to ensure that certain stations do not engage in a practice that is sometimes referred to as "cherry picking," i.e the selective

² Digital Television Distributed Transmission System Technologies, Clarification Order and Notice of Proposed Rulemaking, FCC 05-192, ¶ 11 et. seq. (Nov. 3, 2005) (NPRM).

³ Id.

⁴ NPRM, ¶ 25.

coverage of some communities within a service area while denying service to other communities.⁵ However, public television stations operate under a mandate within the Public Broadcasting Act to provide universal service to all Americans and have no intention of disenfranchising any Americans.⁶

On the other hand, in some instances, distributed transmission networks may be useful to deliver a signal to dispersed and isolated communities that, for instance, may be shielded by difficult and unpopulated terrain. In such circumstances, it makes little sense to require that a station build out such a system in a way that replicates a theoretical coverage area where substantial portions of that coverage area are significantly depopulated. In this regard, the Commission has wisely characterized its replication requirement in terms of ensuring that a station reaches the same number of *viewers* it would reach with its single-transmitter facilities.

“At a minimum, we propose that we would deny any application to construct DTS facilities that would result in loss of service to the population currently served within the licensee’s service contour. We note that, under our interim policy, we now consider this issue on a case-by-case basis to determine if the DTS operator would serve “essentially all of its replication coverage area,” which

⁵ Id.

⁶ See 47 U.S.C. §§ 396(5) (“it furthers the general welfare to encourage public telecommunications services which will be responsive to the interests of people both in particular localities and throughout the United States, which will constitute an expression of diversity and excellence, and which will constitute a source of alternative telecommunications services for all the citizens of the Nation”); (7) (“it is necessary and appropriate for the Federal Government to complement, assist, and support a national policy that will most effectively make public telecommunications services available to all citizens of the United States”); (9) it is in the public interest for the Federal Government to ensure that all citizens of the United States have access to public telecommunications services through all appropriate available telecommunications distribution technologies”).

would include all viewers within the station's replicated service area who are predicted to be served by the station's current analog transmitter.”⁷

APTS believes this apparent focus on viewers, rather than geography, is appropriate and should be maintained. Where the Commission does use technical geographic coverage criteria for its replication requirement, it should clarify that its ultimate policy goal is to ensure continuity of coverage for viewers and should entertain case-by-case applications for reduced geographic coverage consistent with this overall policy goal.

C. In Some Circumstances, the Commission Should Allow Distributed Transmission Systems to Operate Beyond the Hypothetical Maximization Contour But Only as a Secondary Service

The Commission proposes to confine distributed transmission systems to the areas that would “reflect DTV stations’ potential maximized facilities, generally allowing stations using DTS to achieve the coverage that would be achieved if the station were authorized at maximum effective radiated power and antenna height specified in the Commission’s rules.”⁸ However, there are some circumstances where it would be necessary to place a distributed transmission facility in a location that disseminates a signal to regions at the border of the main station’s hypothetical maximized service area. In these circumstances, it may be technically difficult if not impossible to ensure that any signal carry-over beyond the hypothetical border does not occur. APTS requests that the Commission allow such signal carry-over but under the assumption that any distributed transmission system signal that is received beyond the hypothetical border possess secondary status vis a vis other primary services.

⁷ NPRM, ¶ 25.

⁸ NPRM, ¶ 20.

Conclusion

For the foregoing reasons, APTS supports primary regulatory status for distributed transmission systems. In addition, APTS requests that if the Commission requires replication of a single-transmitter station's contour, the Commission should adopt a policy of ensuring continuity of *viewership* rather than relying on a simple geographic replication. Secondly, APTS requests that the Commission allow the dissemination of distributed transmission system signals beyond the proposed hypothetical digital maximization contour but as a *secondary* service subject to the prior claims of other primary services.

Respectfully submitted,

/s/ Lonna M. Thompson
Lonna M. Thompson
Vice President & General Counsel
Andrew D. Cotlar
Associate General Counsel
Association of Public Television Stations
666 Eleventh Street, NW, Suite 1100
Washington, D.C. 20001
www.pts.org
Telephone: 202-654-4200
Fax: 202-654-4236

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